

Amendments to the Specification

Please amend paragraphs [0003], [0004], [0006], and [0012] as follows:

[0003] In US-A 4, 681,661 a heat integrated distillation column has been described, ~~which~~ where the distillation column comprises a central column, and an outer, annular column around the central column. Thereby different regions are provided in the column, which regions can be operated at different pressures. Both regions are provided with conventional trays and downcomers.

[0004] In US-A 5,783,047 a heat integrated distillation column has been described, which column comprises an outer shell and inside one or more tubes. Thereby different regions are provided in the column, ~~which~~ and the regions can be operated at different pressures. However, in order to provided sufficient heat exchange area between the two regions in industrial large scale operations, several tubes of relatively small diameter have to be placed in the outer shell. Due to the relatively small diameter have to be placed in the outer shell. Due to the relatively small diameter of the tubes, the use of distillation internals inside the tubes is limited to irregular packing rings or structured packing. The use of trays requires a complicated construction.

[0006] This object and other objects are provided for by the column of the invention. This column is a heat integrated distillation column comprising a cylindrical shell having an upper and a lower end and at least one first inner volume and at least one second inner volume in the shell, the two volumes being in heat exchanging contact with each other through a wall separating the volumes. In one illustrative example, the improvement comprising providing means having heat exchanging capacity extending through the ~~said~~ wall from ~~said at least one~~ the first volume into ~~said at least one~~ the second volume, whereby the inside of the ~~said~~ heat exchanging means is in open connection with the ~~said~~ first volume. Of course the heat exchange means have no connection for mass transfer to the other (second) volume.

[0012] In the heat integrated distillation column of the invention, in both of the volumes, vapour which enters from the lower end and goes out of the upper end comes in contact with liquid which enters from the upper end and flows to the lower end, on the surface of the packing or on the trays[[]]. At this time, the mass transfer occurs, and hence the distillation operation is performed. In the heat integrated distillation column of the invention, two distillation sections, i.e., a higher-pressure section and a lower-pressure section are disposed in one column.